

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the above-identified application.

Listing of Claims

1. (Currently Amended) A method comprising:
a computer system generating first and second write transactions;
wherein the first and second write transactions comprise first and second tags,
respectively, ~~wherein each of the first and second tags relate the first write transaction to the second write transaction;~~
the computer system transmitting the first and second write transactions, including the
first and second tags, respectively, to first and second storage devices,
respectively;
wherein the first write transaction comprises data D to be written;
wherein the second write transaction comprises data D to be written.
2. (Currently Amended) The method of claim 1 further comprising:
the computer system generating third and fourth write transactions;
wherein the third and fourth write transactions comprise third and fourth tags,
respectively, ~~wherein each of the third and fourth tags relate the third write transaction to the fourth write transaction;~~
the computer system transmitting the third and fourth write transactions to the first and
second storage devices, respectively.
3. (Cancelled)

4. (Currently Amended) The method of claim 1 further comprising:
the first storage device receiving the first write transaction;
the first storage device storing first write information in an entry of a first tag table,
wherein the first write information comprises the first tag and an identity of a
logical block where data D is to be written, wherein the first tag table is stored in
first memory;
the second storage device receiving the second write transaction;
the second storage device storing second write information in an entry of a second tag
table, wherein the second write information comprises the second tag and an
identity of a logical block where data D is to be written, wherein the second tag
table is stored in second memory.
5. (Previously Presented) The method of claim 1 wherein:
the first write transaction comprises data D to be written to a range of logical blocks of a
first storage object;
the second write transaction comprises data D to be written to a range of logical blocks of
a second storage object.
6. (Currently Amended) The method of claim 5 further comprising:
the first object storage device receiving the first write transaction;
the first storage device storing first write information in an entry of a first tag table,
wherein the first write information comprises the first tag, an identity of the first
storage object, and an identity of the range of logical blocks of the first storage
object where data D is to be written, wherein the first tag table is stored in first
memory;
the second object storage device receiving the second write transaction;
the second storage device storing second write information in an entry of a second tag
table, wherein the second write information comprises the second tag, an identity
of the second storage object, and an identity of the range of logical blocks in the
second storage object where data D is to be written, wherein the second tag table
is stored in second memory.

7. (Original) The method of claim 4 further comprising comparing the contents of one entry in the first tag table with the contents of entries in the second tag table to determine whether the second tag table includes an entry that matches the one entry.
8. (Original) The method of claim 7 further comprising copying data, associated with the logical block number identified by the one entry, from the first storage object to the logical block in the second storage object if the second table lacks an entry with contents matching the contents of the one entry.
9. (Original) The method of claim 7 further comprising deleting the one entry in the first table if the second table contains an entry with contents that match the contents of the one entry.
10. (Original) The method of claim 9 further comprising deleting the entry in the second table with contents that match the contents of the one entry.
11. (Previously Presented) The method of claim 1 further comprising:
 - the computer system generating a write transaction to write data to a logical block of a data volume;
 - the computer system incrementing a counter in response to generating the write transaction;
 - the computer system generating the first and second tags as a function of an output of the incremented counter.
12. (Previously Presented) The method of claim 1 wherein the first and second storage devices comprise first and second object storage devices, respectively.
13. (Original) The method of claim 1 wherein:
 - the first write transaction comprises data D to be written to an extension of a first storage object;
 - the second write transaction comprises data D to be written to an extension of a second storage object.

14. (Currently Amended) The method of claim 13 further comprising:
the first object storage device receiving the first write transaction;
the first storage device storing first write information in an entry of a first tag table, the first write information comprising the first tag, an identity of the first storage object, and an indication that data D is to be stored in the extension of the first storage object, wherein the first tag table is stored in first memory;
the second object storage device receiving the second write transaction;
the second storage device storing second write information in an entry of a second tag table, the second write information comprising the second tag, an identity of the second storage object, and an indication that data D is to be stored in the extension of the second storage object, wherein the second tag table is stored in second memory.
15. (Currently Amended) A method comprising:
generating first and second write transactions;
wherein the first and second write transactions comprise first and second tags, respectively, wherein the first and second tags are identical to each other;
~~the computer system~~ transmitting the first and second write transactions including the first and second tags, respectively, to first and second storage devices, respectively;
wherein the first write transaction comprises data D;
wherein the second write transaction comprises data D.

16. (Currently Amended) The method of claim 1:
wherein the computer system generates the first and second write transactions in response to generation of a write transaction by a first application executing on the computer system, wherein the first and second tags are generated by a first tag generator;
a second computer system generating third and fourth transactions in response to generation of a write transaction by a second application executing on the second computer system;
wherein the third and fourth write transactions comprise third and fourth tags, respectively, ~~wherein each of the third and fourth tags relate the third write transaction to the fourth write transaction;~~ wherein the third and fourth tags are generated by a second tag generator.
17. (Currently Amended) A computer readable medium storing instructions executable by a computer system, wherein the computer system implements a method in response to executing the instructions, the method comprising:
generating first and second write transactions;
wherein the first and second write transactions comprise first and second tags, respectively, ~~wherein each of the first and second tags relate the first write transaction to the second write transaction;~~
transmitting the first and second write transactions including the first and second tags, respectively, directly or indirectly to first and second storage devices, respectively;
wherein the first write transaction comprises data D to be written;
wherein the second write transaction comprises data D to be written.

18. (Currently Amended) The computer readable medium of claim 17 wherein the method further comprises:
- generating third and fourth write transactions;
 - wherein the third and fourth write transactions comprise third and fourth tags, respectively, ~~wherein each of the third and fourth tags relate the third write transaction to the fourth write transaction;~~
 - transmitting the third and fourth write transactions directly or indirectly to the first and second storage devices, respectively.
19. (Cancelled)
20. (Original) The computer readable medium of claim 17 wherein:
- the first write transaction comprises data D to be written to a range of logical blocks of a first storage object;
 - the second write transaction comprises data D to be written to a range of logical blocks of a second storage object.
21. (Original) The computer readable medium of claim 17 wherein the first tag is identical to the second tag.
22. (Previously Presented) The computer readable medium of claim 17 wherein the method further comprises:
- generating a write transaction to write data to a logical block of a data volume;
 - incrementing a counter in response to generating the write transaction;
 - generating the first and second tags, wherein the first and second tags are generated as a function of an output of the incremented counter.
23. (Previously Presented) The computer readable medium of claim 17 wherein the first and second storage devices comprise first and second object storage devices, respectively.

24. (Original) The computer readable medium of claim 17:
the first write transaction comprises data D to be written to an extension of a first storage object;
the second write transaction comprises data D to be written to an extension of a second storage object.
25. (Cancelled)
26. (Currently Amended) A One or more computer readable mediums storing executable instructions executable by a computer system, ~~wherein the computer system implements~~ wherein a method is implemented in response to executing the instructions, the method comprising:
in response to receiving a first transaction comprising a first tag and data D, storing first write information in an entry of a first tag table, wherein the first write information comprises the first tag and an identity of a logical block where the data D is to be written, wherein the first tag table is stored in first memory; ~~wherein the first tag corresponds to a second tag of a second write transaction;~~
~~a second storage device receiving the~~ in response to receiving a second write transaction comprising a second tag and data D, ~~wherein the second write transaction includes the second tag when the second storage device receives the second write transaction;~~
~~the second storage device~~ storing second write information in an entry of a second tag table, the second write information comprising the second tag and an identity of the logical block where data D is to be written, wherein the second tag table is stored in second memory.

27. (New) The method of claim 4 further comprising:
synchronizing said first and second storage devices in response to the entry of the first tag
table not matching the entry of the second tag table.
28. (New) A method comprising:
generating first and second write transactions;
generating first and second tags;
transmitting the first write transaction to first storage device;
transmitting the second write transaction to second storage device;
transmitting the first tag to the first storage device;
transmitting the second tag to the second storage device;
wherein the first write transaction comprises data D to be written;
wherein the second write transaction comprises data D to be written;
receiving the first write transaction at the first storage device;
receiving the first tag at the first storage device;
storing the first write information in an entry of a first tag table, wherein the write
information comprises the first tag and an identity of a logical block where data D
is to be written, wherein the first tag table is stored in first memory;
receiving the second write transaction at the second storage device;
receiving the second tag at the second storage device;
storing the second write information in an entry of a second tag table, wherein the write
information comprises the second tag and an identity of a logical block where
data D is to be written, wherein the second tag table is stored in second memory.

29. (New) A method comprising:
comparing first write information in an entry of a first tag table with the second write information in an entry of a second tag table;
wherein the first write information comprises a first tag and an identity of a logical block where data D is to be written, wherein the first tag table is stored in a first memory device;
wherein the second write information comprises a second tag and an identity of a logical block where data D is to be written, wherein the second tag table is stored in a second memory device;
synchronizing first and second storage devices in response to the entry of the first tag table not matching the entry of the second tag table.
30. (New) The method of claim 29, wherein:
synchronization comprises copying the entry of one tag table to the other.